



Recycling Market Development &  
Expansion Grant Program  
**Business Plan**



DOR Market Research Branch  
Market Expansion Section

## **INTRODUCTION**

Assembly Bill 28 (AB 28)(Chapter 753, Stat. 2003), effective January 1, 2004, authorizes the Department of Conservation (Department), Division of Recycling (Division) to expend up to \$10 million annually, until January 1, 2007 for recycling market development and expansion-related activities aimed at increasing the recycling rate and end-uses for beverage containers, including but not limited to, the following:

- Research and development of collecting, sorting, processing, cleaning, or otherwise upgrading the market value of recycled beverage containers.
- Identification, development and expansion of end-use markets for recycled beverage containers.
- Research and development for products manufactured using recycled beverage containers.

The Market Expansion Section within the Division's Market Research Branch would have the responsibility of implementing the annual \$10 million Market Development and Expansion Grant Program to increase the recycling and expand possible end-uses for empty beverage container materials in the most effective and efficient manner.

## **STATEMENT OF PURPOSE**

The mission of the Recycling Market Development and Expansion Grant Program is to assist the Division to achieve an 80 percent recycling rate for beverage containers. An increased demand for beverage container materials would create and maintain a profitable marketplace for recycling centers and recycling opportunities for consumers. This would be attained through the expansion of existing and developing new end-uses and increasing the supply of high quality beverage container material feedstock for use in manufacturing.

The goals of the Recycling Market Development and Expansion Grant Program are:

1. To expand, develop and maintain markets in California by encouraging the availability and use of value-added recycled beverage container materials, resulting in an increase in both supply and demand.
2. To identify and realize market development and expansion opportunities to ensure sustainable recycled beverage container material markets.
3. To encourage new and existing businesses to develop and utilize innovative processing and manufacturing technologies, facilitating the processing of recycled beverage container material into quality feedstock for use in the manufacture of quality recycled-content products.

4. To encourage and support market development and expansion for empty beverage container materials by providing information and assistance in areas including, but not limited to:
  - Recycling and manufacturing technology development.
  - Support for existing, new, and proposed recycled product manufacturers.
  - Converting from virgin to recycled feedstock.
  - Developing best practices in collection and processing.
  - Model practices that address barriers to the purchase of recycled-content products and improve procurement specifications and market leverage for “Buy recycled” programs.
5. To support research and development projects bringing more high quality feedstock and recycled content products to the marketplace and additional processing and manufacturing industries and/or technologies which would ultimately result in job creations in California.

## **MARKET BARRIERS**

Currently recycling markets provide many significant challenges that require resolution to ensure the sustained supply and demand of recycled beverage containers. The problems experienced by recyclers and manufacturers include:

1. Curbside single stream collection methods are more common, resulting in higher levels of contamination impacting the quantity, quality, and consistency of recycled beverage container materials.
2. Glass container and fiberglass manufacturers have found it increasingly difficult to obtain consistent supplies of quality recycled beverage container cullet resulting in difficulties meeting minimum content laws.
3. Limited processing and end-use markets for plastic resins #3 - #7.
4. Inefficient and/or antiquated processing equipment affecting the capacity to handle the additional volumes and material types of recycled beverage containers resulting from the addition of containers into the beverage container recycling program January 1, 2000.
5. Processing technologies not consistent with changing collection and recycling practices.
6. Highly fluctuating scrap values.
7. Inconsistent supplies and quality of plastic resins #1 - #2.
8. Competition with non-sustainable overseas markets.

9. Interstate transport.

10. Lack of access to capital for manufacturers seeking to commercialize recycled content products.

As the beverage container recycling industries and markets change and evolve, the challenges of the recycling industries are increasing due to high contamination levels and limited markets. The goals of the Recycling Market Development and Expansion Grant Program would address current problematic market conditions.

## **ADMINISTRATIVE PLAN**

Through the Recycling Market Development and Expansion Grant Program, staff propose to provide the following services in order of priority based upon resources:

1. Grant Administration—Develop and release a request for proposal (RFP) to solicit, evaluate and make recommendations to fund the most effective proposals, manage grant agreements, and ensure fiduciary responsibility and operational and financial compliance. The proposed grant solicitation and evaluation process is described in greater detail under the heading “Grant Funding Services Plan.”
2. Market Expansion and Economic Development Agency Coordination—These activities are related to building relationships with related government and private entities funding similar activities. This would ensure that potential applicants receive the benefit of the combined services and funding opportunities from all prospective sources. Coordination would be maintained with agencies such as:
  - California Integrated Waste Management Board (CIWMB)
  - California Energy Commission
  - U.S. Environmental Protection Agency (US EPA)
  - California Association of Recycling Market Development Zones (CARMDZ)
  - California Resource Recovery Association (CRRA)
  - National Recycling Coalition (NRC)
  - Materials for the Future Foundation (MFF)
3. Market Analysis—The first component of market analysis would be to conduct research to achieve a clear understanding of industry participants and the impact of grant funds on the balance of competitive forces in the industry. This information is integral to creating funding criteria that provides assistance to the entire industry rather than an individual industry participant. The second component of market analysis would include research to determine opportunities for more effective collection and processing, new uses of recycled material, and potential for feedstock-conversion by identifying:

- Markets currently using only virgin materials.
  - Markets using limited recycled materials only.
  - Market inefficiencies preventing increased use of recycled material.
  - Market opportunities that may be realized if these inefficiencies were overcome.
4. Industry Analysis—There are potentially many industries that can benefit from high-quality recycled feedstock. The goal of the industry analysis would be to review the opportunities and barriers for expansion and economic development of in-state beverage container manufacturing and end-use infrastructure, e.g., the equipment and facilities capable of using California processed beverage container materials in California to produce new products. The analysis would review individual industries as well as relationships between industries providing recycled beverage container material and industries that can potentially use the material. Industry analysis would also include reviews of new applications for manufacturing and processing of beverage container materials, especially some of the low-value plastic resins #3 - #7. Specific results of the industry analysis component would be as follows:
- Develop a database on the performance of recycled materials in various applications that would be made available to industry and may be used as criteria development related to the grant program.
  - Identify innovative approaches to improving the collection and processing of recycled materials, including reducing contamination.
  - Promote public-private partnerships to accelerate the commercialization of manufacturing technologies using recycled materials.
  - Identify barriers to manufacturing with increased levels of recycled materials and solicit proposals to overcome those barriers.
5. Literature Review and Research—Staff would review the existing information, resources and studies relating to research and development in manufacturing and processing that have been conducted throughout the country. Upon request, the information would be shared with prospective grant applicants.

## **GRANT FUNDING SERVICES PLAN**

Funding priority would be given to those proposals that have the greatest potential of expanding end-use markets, the recyclability of beverage container materials in California, and improving job creation as identified in the Statement of Purpose.

The Market Expansion Section staff propose to form an advisory workgroup consisting of members from various state (e.g., CIWMB, California Energy Commission, etc.) and federal (e.g., US EPA) agencies, recycling industries, and other interest groups (e.g., NRC, Processors, Manufacturers, etc.). This workgroup would advise the Division on the development of guidelines to clarify the criteria for

eligible organizations and projects. Areas of assistance include, but are not limited to:

- Potential Eligibility Criteria
- Matching Funding Requirements
- Funding Limits
- Grant Timelines
- Scoring Criteria of Proposals
- Services to be Provided with Resources Available
- Effectiveness and Efficiency Measurements

The grant process would go through various procedural steps resulting in viable projects to meet the goals of the grant program and the intent of the Legislature. To ensure that the Recycling Market Development and Expansion Grant Program is successful and is beneficial to California and its citizens, it is important to note that out-of-state businesses will be eligible to compete for the funding only if the company intends to establish a California site or provide direct assistance/resources to a California entity.

Considering input from the advisory workgroup, an RFP will be used to solicit proposals. The RFP will include general information about the beverage container recycling program, goals and objectives of the grant program, and the application and selection process. Additionally, it is anticipated that a workshop would be conducted at both a northern and southern California location to ensure that the RFP process is successful.

The Division would establish a market development and expansion grant evaluation committee that may include staff from the Department and some members of the advisory workgroup. The market development and expansion grant evaluation committee would submit its recommendation of potential grantees to the Assistant Director for Recycling for review and approval prior to the final review and approval by the Director of the Department of Conservation.

The market development and expansion grant evaluation committee would review viable projects that promote, among other things:

- The expansion and economic development of in-state beverage container manufacturing and end-use infrastructure, e.g., the equipment and facilities capable of using California processed beverage container materials in-state to produce new products.
- The expansion and economic development of in-state beverage container processing (including collection) infrastructure e.g., the equipment and facilities that transform reclaimed beverage container material(s) into value-added materials for end-use.
- Research and development to discover new applications for manufacturing and processing of beverage container materials, especially the low-value plastic resins #3 - #7.

## **PROMOTIONAL PLAN**

To ensure the broadest involvement possible and to ensure funding is provided to the best possible projects, Market Expansion Section staff would work and consult with the Department's Public Information Office and its public relations contractor to identify the most effective and feasible information campaign to promote the \$10 million Market Development and Expansion Grant Program to all interested parties. Methods to reach all potentially interested parties could include notices to all recycling program participants; articles in publications; presentations at trade shows, conferences, and public venues; and information posted on the Department's and other state agencies' websites (i.e., CIWMB, etc.).

The target audience for the grant program would include, but not be limited to, the following:

- Processors
- Manufacturers, New and Existing
- Local, State and Federal Agencies
- Non-profit Organizations
- Educational, Public, and Private Research and Development Institutions
- Inventors and Entrepreneurs

## **PERSONNEL**

Existing staff in the Market Expansion Section of the Market Research Branch would provide the services described under the Grant Administration section and contract funds will be utilized for preliminary market analysis. Other proposed services would be limited in scope due to a lack of resources. The grant program could be successfully established based on grant administration and preliminary market analysis to ensure the intent of the Legislature and fiduciary responsibilities are fulfilled.

## **ORGANIZATION**

The Market Research Branch contains a corps of professionals who are extremely knowledgeable and enthusiastic about recycling and beverage container material markets. In addition, these professionals are highly dedicated to the goal of raising the level of recycling activity in the state.

The Market Research Branch is the resource for manufacturers and processors using or considering using recycled beverage container materials. Through the Department's endeavors to make the state's beverage container recycling program a success, the state's program staff are recognized nationally and internationally as experts on data collection and program administration as it relates to the recycling of beverage containers.

## MARKET EXPANSION

Market Expansion Section staff have extensive knowledge and experience with recycling technologies, grant management, end-use markets, application processing, manufacturing, and recycled content products, as well as the California beverage container recycling program. Staff possess knowledge in the markets and trends of different beverage container material types (aluminum, glass, and plastic). Such knowledge is essential to administer a successful market development and expansion grant program. The Market Expansion Section functions as a “clearing house” for market development and expansion information and technical assistance; performs research on market development trends, new technologies, and recycled content products; publishes bulletins disseminating data and emerging technical information; administers and maintains the Market Connection directory of recycled content manufacturers and dealers/retailers; promotes “Buying Recycled” with the use of a mobile exhibit trailer and various other product displays at large venues throughout the state; monitors statewide average scrap values; and acts as a resource for manufacturers and processors using or considering the use of recycled beverage container materials.

Through the course of their careers with the Division, staff have developed excellent working relationships with members of the recycling industry, local, state and federal agencies, private entities, and the public.

Market Expansion Section staff have administered grants to nonprofit organizations and local governments for the purposes of market development and expansion. Previously there was an allocation of \$2 million dollars for recycling grant programs. The Market Expansion Section staff was responsible for administering market development and expansion grants, and therefore bring experience ideally suited to implement the Market Development and Expansion Grant Program.

Market Expansion Section staffs’ knowledge, networking abilities, and dedication will ensure that the \$10 million grant program will be successful and will meet the intent of the Legislature and benefit California. Staffs’ experience includes:

- **Recycling and Processing Technologies:** Zenny Yagen, Jim Hill, Greg Popejoy, and Vicky Castle  
Knowledge and experience in working with the recycling and processing industries in collection, sorting, and processing technologies related to contamination issues as well as minimum content, material handling efficiencies, and recycling costs.
- **Market Development and Expansion Grant Management:** Zenny Yagen, Jim Hill, Greg Popejoy, Maria Cornejo, and Sharon Minard  
Knowledge and experience in grant and contract management relating to market development and expansion projects.



- **End-Use Markets:** Zenny Yagen, Jim Hill, Vicky Castle, Greg Popejoy, Sharon Minard, and Maria Cornejo  
Knowledge and experience in end-use markets, scrap values, and glass and fiberglass minimum content.
- **Manufacturing:** Zenny Yagen, Jim Hill, Greg Popejoy, and Vicky Castle  
Knowledge, experience, and long-term working relationships with industry to provide resources in using recycled beverage containers for new products. Extensive work with virgin and recycled-content industries seeking expansion in or to California.
- **Recycled Content Products:** Zenny Yagen, Maria Cornejo, Jim Hill, Greg Popejoy, Vicky Castle, and Sharon Minard  
Knowledge and experience in coordinating materials and events to exhibit products that promote public awareness of the recycled content products manufactured from beverage containers.
- **Market Connection:** Maria Cornejo and Sharon Minard  
Quarterly publication of recycled content dealers/retailers, manufacturers, brokers, equipment suppliers, processors, recyclers and collection programs.
- **Technical Assistance:** Maria Cornejo (Plastic); Jim Hill, Vicky Castle (Glass); Sharon Minard (Aluminum); Greg Popejoy (Bimetal)  
Provide technical assistance in the areas of: processing, markets, new technology trends, establishment of new businesses in the state that would use beverage container materials in their processes, new containers, market expansion grants, and recycled content products.
- **Glass and Fiberglass Minimum Content** – Zenny Yagen and Jim Hill  
Collect, monitor, and calculate glass minimum content usage for manufacturing glass containers and fiberglass.
- **Scrap Value Calculation** –Zenny Yagen, Sharon Minard, and Vicky Castle  
Collect data specific to and calculate monthly scrap values for each container material type; prepare monthly scrap value notices; and perform field data verification.
- **Redemption and Recycling Rates** – Zenny Yagen and Vicky Castle  
Calculate the redemption and recycling rates for each container material type and prepare biannual reports.
- **Disposal** – Jim Hill (Glass), Zenny Yagen and Greg Popejoy (Plastics)  
Receive requests to dispose of beverage container materials from recyclers and processors; assist recyclers and processors to locate markets for their materials to divert disposal.

- **Quality Glass Incentive Payment** – Vicky Castle and Zenny Yagen  
Calculate and process Quality Glass Incentive Payment program payments to improve quality glass feedstock from operators of curbside programs. Provide technical assistance to processors and curbside programs.